

## INTRA-SERVICE SECTION 7 BIOLOGICAL EVALUATION FORM

**I. Region:** 3; Michigan

**II. Service Activity:**

Migratory Birds and State Programs Section 7 Consultation on the Implementation of the Public Resource Depredation Order (PRDO) for Double-crested Cormorant (DCCO) Management in the State of Michigan.

**III. Pertinent Species and Habitat:**

**A. Listed species and/or critical habitat within the action area:**

Piping plover*	( <i>Charadrius melodus</i> ) [Endangered (E)]
Bald eagle	( <i>Haliaeetus leucocephalus</i> ) [Threatened (T)]
Houghton's goldenrod	( <i>Solidago houghtonii</i> ) [T]
Dwarf lake iris	( <i>Iris lacustris</i> ) [T]
Pitcher's thistle	( <i>Cirsium pitcheri</i> ) [T]
Whooping crane	( <i>Grus americana</i> ) (Experimental non-essential (XN))

\* Denotes species with critical habitat designations

**B. Proposed species and/or proposed critical habitat within the action area**

None

**C. Candidate species within the action area:**

The Eastern massasauga rattlesnake (*Sistrurus catenatus catenatus*) has a widespread distribution in lower Michigan, primarily on mainland sites. It may be present in a very few island locations, such as Bois Blanc Island, Mackinac County, and in Saginaw Bay.

**IV. Geographic area and action:** The islands and near shore areas of inland waters and the Great Lakes of Michigan and also State and Federal aquaculture facilities in Michigan. The proposed action is the control of DCCOs through a combination of non-lethal and lethal techniques under the PRDO as described in Alternative 1 of the Environmental Assessment.

**V. Location:** The PRDO applies to all lands and freshwaters (where double-crested cormorants may be found) in the State of Michigan.

Breeding habitat (March - July): Ponds and lakes (natural and artificial), slow-moving rivers, lagoons, and open coastlines. Small rocky or sandy islands if available. Nests built in trees, on structures, or on the ground. Also nests on emergent vegetation in marshes.

Nesting trees and structures usually standing in or near water, on islands, in swamps, or on tree-lined lakes. Roosts and resting places often on exposed sites such as rocks or sandbars, pilings, wrecks, high-tension wires, or trees near favored fishing sites.

Migrating habitat: During migration, DCCOs can be found in any of the areas listed above.

## **VI. Description of Proposed Action:**

### **Existing Conditions**

Currently, three options are available to reduce resource damages associated with DCCOs in Michigan: (1) birds can be harassed (with shotgun blasts, fire crackers, propane cannons, or other scare devices); (2) fish-rearing facilities can be fitted with physical barriers such as wire or mesh netting that prevent birds from landing; and (3) the U.S. Fish and Wildlife Service (Service) Regional Migratory Bird Permit Office can issue agencies or individuals a permit to take DCCOs (via shooting, egg oiling/destruction, or nest destruction).

Through the Final Environmental Impact Statement on double-crested cormorant management in the United States and its associated regulations, the Service supplemented these three options with one additional option in the State of Michigan, the PRDO. The PRDO authorizes “State fish and wildlife agencies, Federally recognized Tribes, and State Directors of the Wildlife Services program of the U.S. Department of Agriculture Animal and Plant Health Inspection Service (collectively termed “Agencies”) to take without a permit double-crested cormorants found committing or about to commit, and to prevent, depredations on the public resources of fish (including hatchery stock at Federal, State, and Tribal facilities), wildlife, plants, and their habitats.”

The specific control actions authorized under the PRDO include shooting, egg oiling, egg and nest destruction, CO<sub>2</sub> asphyxiation, and cervical dislocation (year-round, but there will be seasonal variations in need for control such that States with breeding DCCOs will focus actions from April to July and States with wintering DCCOs will focus actions from November to March).

*Shooting:* Shooting DCCOs is a highly targeted specific technique that is believed to reinforce non-lethal harassment. In the case of DCCOs, shooting is always conducted with shotguns or rifles. When used by trained personnel, the risk of inadvertently taking nontarget species is minimal. Shooting can be conducted from a distance and while this quality minimizes the likelihood of direct human disturbance to species co-occurring with DCCOs, the noise associated with gunfire could cause indirect disturbance.

*Egg oiling and destruction:* DCCO eggs have been destroyed in attempts to reduce recruitment into populations and to eliminate colonies at specific locations. Egg oiling is a method of suppressing reproduction of nuisance birds by spraying a small quantity of 100% corn oil on eggs in nests. The oil prevents exchange of gases and causes asphyxiation of developing embryos. The Environmental Protection Agency has ruled that use of corn oil for this purpose is exempt from registration requirements under the Federal

Insecticide, Fungicide, and Rodenticide Act. This method is extremely target-specific. However, it requires direct physical contact with DCCOs, their eggs, or their nests which necessitates immediate human presence at nest and roost sites. Such control efforts are typically conducted on foot by a small number of personnel in order to minimize incidental disturbance of other species, especially at nest colonies.

*Nest destruction:* Nest removal is the removal of nesting materials during the construction phase of the nesting cycle. Nest destruction on the ground simply involves the physical breakup of nest structures. Tree nests present a greater challenge. Nests can be destroyed manually or by use of high pressure water to dislodge nests from trees.

*Cervical dislocation:* Cervical dislocation is sometimes used to euthanize birds which are captured by hand or in live traps and when relocation is not a feasible option. The bird is stretched and the neck is hyper-extended and dorsally twisted to separate the first cervical vertebrae from the skull. The American Veterinary Medical Association approves this technique as a humane method of euthanasia. In the case of DCCOs, this is a secondary technique that will generally be used only when damage control personnel are already on site using other methods such as egg oiling.

*CO<sub>2</sub> asphyxiation:* CO<sub>2</sub> is sometimes used to euthanize birds which are captured by hand or in live traps and when relocation is not a feasible option. Live birds are placed in a container such as a plastic 5-gallon bucket or chamber and sealed shut. CO<sub>2</sub> gas is released into the bucket or chamber and birds quickly die after inhaling the gas. This method is approved as a euthanizing agent by the American Veterinary Medical Association. In the case of DCCOs, this is a secondary technique that will generally be used only when damage control personnel are already on site using other methods such as egg oiling.

## **VII. Determination of effects:**

### **A. Explanation of effects of the action on species and critical habitats in items III. A, B, C:**

**Piping plover (*Charadrius melodus*) [E]\*:** The piping plover is listed as endangered in Michigan. Great Lakes piping plovers nest on sandy beaches, sandflats, dredge islands, and drained floodplains. They are generally solitary nesters but may nest with terns. While the preferred nesting habitat of DCCOs and piping plovers is different, they may be found in close enough proximity that it is possible that activities authorized by the proposed action could lead to harassment (i.e., incidental take) of piping plovers. There will be no modification to designated critical habitat.

**Bald eagle (*Haliaeetus leucocephalus*) [T]:** The bald eagle was proposed for delisting in 1999. The aquatic habitat preferences of the bald eagle make it likely to co-occur with DCCOs in Michigan. Because bald eagles are widely recognized bird, the risk of direct take of bald eagles is low. However, it is possible that they could be harassed indirectly by

activities associated with the proposed action (because of human disturbance in the vicinity of their nests or roosts). There is also a likelihood, albeit low, that bald eagles could benefit from reduced competition with DCCOs (since both are piscivorous).

**Whooping crane (*Grus americana*) [XN]:** For the past three years, successive cohorts of a nonessential experimental population of whooping cranes have been raised at Necedah National Wildlife Refuge (WI) and then led in aerial migration to Chassahowitzka National Wildlife Refuge (FL). At present (May 14, 2004), eight of these birds are in west and southwest lower Michigan. These eight are yearling birds assumed to be transient enroute to Wisconsin, but are off course and experiencing difficulties getting around Lake Michigan. They are not likely to be present in areas occupied by DCCOs. These birds will not be adversely affected by the proposed action.

**Houghton's goldenrod (*Solidago houghtonii*) [T]:** This plant is mostly limited to shoreline habitats on the northern shores of Lakes Michigan and Huron. It is found in sparsely vegetated, moist, sandy, interdunal depressions; rocky and cobbly shores; beach flats and calcareous beach sands; and seasonably wet alvar, occasionally in association with Pitcher's thistle and dwarf lake iris. DCCOs may be having negative effects upon the distribution of this species; thus the proposed action could benefit it.

**Dwarf lake iris (*Iris lacustris*) [T]:** This plant is found almost exclusively on the northern shores of Lakes Michigan, Huron and Superior, most often in young, well-drained soils ranging from sands to gravels to sandy clay loam and organic-enriched sands. DCCOs may be having negative effects upon the distribution of this species; thus the proposed action could benefit it.

**Pitcher's thistle (*Cirsium pitcheri*) [T]:** This plant is found in a narrow band along the margins of Lakes Michigan, Huron, and Superior with 90 % of sites occurring in Michigan and some sites occurring in Indiana and Wisconsin. The species is a regional endemic restricted to dune habitats in the western Great Lakes region and appears to establish itself only in very open, sandy soil. DCCOs may be having negative effects upon the distribution of this species; thus the proposed action could benefit it.

**Eastern massasauga rattlesnake (*Sistrurus catenatus catenatus*) [C]** Massasaugas live in or adjacent to wet areas including wet prairies, marshes and low areas along rivers and lakes. In many areas massasaugas also use adjacent uplands during part of the year. They often hibernate in crayfish burrows but they may also be found under logs and tree roots or in small mammal burrows. Unlike other rattlesnakes, massasaugas hibernate alone. Location of massasaugas would overlap with DCCO in only rare instances. Actions taken in DCCO control would not be likely to impact massasaugas nor would any change in DCCO population level be likely to impact them.

\* Denotes species with critical habitat designations

**B. Explanation of actions to be implemented to reduce adverse effects:**

Under the PRDO, there are several conditions that will reduce the likelihood of adverse effects on listed species. Responsible agencies must abide by these conditions in order to undertake activities under the PRDO: (1) a requirement to use non-toxic shot only, thus lessening the likelihood of lead poisoning of non-target wildlife; (2) a requirement to report to the Service any incidental take of a listed species; (3) a provision allowing the Service to suspend the privilege of agencies to take action under the PRDO; and (4) specific provisions for piping plover and bald eagle protection in the PRDO regulations (50 CFR 21.48 (d) (8)). The Environmental Assessment contains a stipulation that WS check the Regional web site prior to conducting activities in a new area to determine if listed species are found in that county. If so, WS will consult with a the East Lansing Ecological Services Field Office (ELFO) to determine if the listed species are found in the specific area before conducting activities associated with the proposed action. WS will avoid any listed species by the distances specified in the PRDO regulations and the EA or, if not feasible, conduct consultation with ELFO.

With regard to listed plants, there is a chance that some of them may be present at or near DCCO control sites. It is highly unlikely that the proposed action would pose any significant adverse effects. Control personnel will familiarize themselves with the appearance and biology of these plants to assure no accidental trampling or similar direct harm results.

**VIII. Effect determination and response requested:**

**A. Listed species/designated critical habitat:**

Determination

No effect/no adverse modifications

~~X~~ Concurrence

Whooping crane (*Grus americana*) [XN]\*

May affect, but is not likely to adversely affect species/adversely modify critical habitat (see below)

~~X~~ Concurrence

Piping plover\* (*Charadrius melodus*) [E]  
Bald eagle (*Haliaeetus leucocephalus*) [T]  
Houghton's goldenrod (*Solidago houghtonii*) [T]  
Dwarf lake iris (*Iris lacustris*) [T]  
Pitcher's thistle (*Cirsium pitcheri*) [T]

May affect, and is likely to adversely affect species/adversely modify critical habitat (see below)

\_\_\_\_\_ Concurrence

\* Denotes species with critical habitat designations

NONE

**B. Proposed species/designated critical habitat:**

Determination

No effect on proposed species/no adverse modifications of proposed critical habitat (see below) \_\_\_\_\_ Concurrence

NONE

Is likely to jeopardize proposed species/ adversely modify proposed critical habitat \_\_\_\_\_ Concurrence

NONE

**C. Candidate species:**

Determination

No effect \_\_\_\_\_ X Concurrence

Eastern massasauga rattlesnake

Is likely to jeopardize candidate species \_\_\_\_\_ Concurrence

NONE

Stephen D. Wills  
Signature

5/18/04  
Date

**IX. Reviewing ESO Evaluation:**

A. Concurrence X Nonconcurrency \_\_\_\_\_

B. Formal consultation required

C. Informal consultation required

D. Informal conference required

E. Remarks

Michael E. Delapite  
Signature

5/19/04  
Date